

INDEX TO VOLUME 172, JANUARY—JUNE, 1945

— A —

Abrasive wheels, bonded	306
Acid resistant glass	110
Adhesives:	
Phenolic glue	311
Polishing-wheel cement	58
Rubber-to-metal	51
Rubber cement	306
Starch	239
Air conditioning:	
Aids precision	368
Multi-room	106
Air sterilizer	182
Air travel growth	25
Airplane loader	155
Alcohol, sweet-potato	44
Alloys, strong	15
Aluminum:	
Alloy in breather caps	243
Drums	117
Freight cars	288
Plating	218, 245
Stretching	108
Ammonia, post-war demand	112
Anniversary Features:	
History of:	
Aviation	327
Chemistry	263
Engineering	71
Metals	199
Plastics	269
Railroads	135
Research	7
Aprons, coated	54
Arcs, measuring	119
Arsenic poisoning antidote	353
Attitude indicator	24
Automobiles:	
Custom built	88
Engine improvements	371
Engineering thinking	208
Engineers' thoughts on	347
Steering, power	347
Tomorrow's vehicles	86, 209, 345
Transmissions	88, 209
Aviation:	
Cargo plane, "Packet"	282
Chemistry and	280
Electronic devices for	348
Engineering co-operation	92
Fuels, improving	351
Low-priced planes	322
Magnesium wings	177
Metals in the air	213
Planes and trains	153
Produce by air	155
Propeller icing	215
Propellers, reversible	25
Research gave mankind wings	22
Rubber used in	100
Seaplane dock	215
Standardized plane parts	322

— B —

Baking, infra-red	158
Battery charger	180
Bearings:	
Industrial anti-friction	336
Largest	121
Pivot	55
Washer	311
Bells, silicon-bronze	360
Blackening metals	55
Boiler water, importance of	115
Bottle seals, sterile indicating	353
Box car, aluminum exterior	175
Brake drums, salvaging	347
Brush, power	186
Butadiene tackiness	218

— C —

Cam cutter	46
Cans:	
Post-war	194
Protecting	161
Carbon:	
Chimney pipes	242
Plating, speeded	48
Carrier current communication system	276
Cellophane:	
Grease-proof	305
Tight-spot	236
Cellulose pellets clean engines	306
Cemented carbide dies	368
Center punch	118
Chemistry:	
Gasoline and	351
Metals of the future	216
Partners in production	98
Research, basic	35
Serves the railroads	159
Clamp, locking	54
Cloth tape	218
Cloud ceiling	212
Coal:	
By-products	235
Fuel economies	33

Coil insulation	119
Collet chuck	118
Color:	
Detectives	238
Dynamics	108
Colored smokes	100
Combustion control, automatic	108
Compar lining	239
Competition and new industries	2
Compressed air purifier	54
Compressibility, beating	24
Construction, post-war employment	115
Contacts sorted electronically	21
Containers, weather-proof	145
Coolant cooling	366
Coolant separator	57
Copper man, cold-room tests	176
Cornerstones, aid industrial construction	34
Couplings, rubber	57
Crane truck	304
Crown gull, chemically controlled	113
Custom built automobiles	88
Cut-outs, ready-pasted	178

— D —

Design, funnyism	234
Diameter measurements	110
Diamond:	
Burs	181
Dresser	53
Die blocks, wooden	34
Die holder, making	185
Die-less duplicating	172
Dies, zinc-alloy	357
Dining cars, post-war	39
Dip tanks	121
Dolly, handling long objects	374
Drawing compound, metal	182
Drawing wire	232
Drills:	
Twist	304
Twisted	175
Drinking cups, plastics	224
Dust collector	304, 373
Dye liquor extractors	304

— E —

Education:	
Broader	109
Industrial scientists	40
Electricity on the farm	194
Electroalvanizing	164
Electronics:	
Aids to research	19
Aviation uses of	348
Beef aging speeded	350
Camera shutter	276
Casting	276
Cloud ceiling	212
Converter	298
Counter	306
Engineered	89
Flaw detector	212
Fractionation speeded by	212
Furnace control	158
Gage	181
Heaters, radio interference from	350
Heating, power concentration for	46
In railroading	156
Induction heater	370
Industrial applications	274
Insulating glass qualities demonstrated	158
Light measurement	350
Metals by	210
Mica testing	158
Mining control units	276
Oscillograph	243
Punch press finger guard	350
Stencil control	212
Tester	91
Wire tester	158
Electroplater, portable	117
Elevator, telescopic	369
Engineering:	
Metals and alloys backbone of	95
Partners in production	226
Production control	30
Engineers and sales	258
Engines:	
All-welded	296
Diesel, new	279
Supercharged bus	258
Explosion-proof motor	183
Eyes, artificial	178

— F —

Fans	375
Farm wastes, uses for	241
Fastening, soft metal	119
Fat salvage	37
Felt manufacture	304
Filtration units	243
Flame-cutting, multiple	178
Floor surface, safety	180
Fluorescent:	
Fixture	302

Lights, non-flickering	303
Flutter recorder	91
Food, packaging	45
Forming, metal parts	33
Fractionation speeded	212
Freezer, assembly-line	44
Freight cars, aluminum	288
Fuel:	
Economies	33
Jet-propulsion laboratory	296
Possibilities, railroad	258
Tablets	219
Furnaces, salt bath	39
Furs, better	29

— G —

Gage blocks	246
Gage fingers	307
Gas generator	185
Gas purifier	309
Gear cutting machine	305
Glass:	
Acid resistant	110
Insulating, qualities demonstrated	158
Insulation	230
Multi-use	194
Plating on	56
Post-war	37
Gloves, bauler's	313
Glycerine, jack-of-all-trades	258
Goggles:	
Light work	119
Moisture free	308
Government and research	2
Grinder:	
Surface	56, 369
Thread	371
Gun barrels, straightened	302
Gun covers	84
Gypsum, post-war	19

— H —

Hand saw retooled	53
Hardness test checking set	313
Hauling, specialized	110
Heat:	
Electrical, for homes	322
Exchangers	41
Radiant:	
In the home	130
Outdoor pavements	248
Resistance, plastics formulation	237
Salvaging	34
Sealing	296
Transfer	101
Heat treatment:	
Convection currents in	292
Fast heat	97
Research in	38
Heaters:	
Baseboard	364
Induction	370
History, industrial: See Anniversary Features	
Hole punching, horizontal	122
Home workshops	39
Hot cropping machine	302
Hot dope	305
Houses, tomorrow's	130
Hydraulic foot pump	300

— I —

Identification stamps	56
Indenting machine	375
Infra-red:	
Baking	158
Lamps	42
Injection molding	312
Inks, steam-set	122
Insulation:	
Cellophane in	236
Coil	119
Glass	230
Nylon	176
Polythene	247

— J —

Jet turbines	365
--------------	-----

— L —

Labor draft problems	258
Landing strips	34
Light:	
Crystallized	39
Filters	240
Measurement, electronic	350
Lighting, benefits of	52
Lithium	66, 217
Locomotives:	
Diesel	288
Modernization	288
Steam, better	114
Trackside servicing	18
Turbine	113
Turbo-electric power	364

Lubricants, industrial and automotive... 121, 181
Lubrication, aircraft... 354

— M —

Machine speeds, electric indicator for... 308
Magnesium:
Alloys... 285
Fires, control of... 148
Porosity... 15
Wings... 177
Management, research and... 2
Markers, crate and box... 180
Masking stickers... 184
Match box, new safety... 250
Materials handling, angle rails for... 230
Materials testing... 177
Measurements:
Arcs... 119
Diameter... 110
Thickness... 94
Metal rolling processes, new... 360
Metals in industry:
Backbone of engineering... 95
Better, through research... 13
By electronics... 210
Corrosion resisting... 283
Critical, post-war production... 365
Degreaser... 183
Heating, research in... 38
In aviation... 213
Of the future... 216
Plastics plus... 222
Precious, recovery... 240
Railroad uses of... 162
Synthetic coated... 130
Microradiography... 219
Microwaves... 174
Milling, high-speed... 164
Models:
Greater use of... 292
Plastics... 29
Show the way... 194
Transparent industrial... 50
Molding:
Continuous... 40
Injection... 312
Press... 240
Molds, gold-plated... 52
Motors:
Minimum maintenance... 289
Timing... 373

— N —

Nickel alloys... 285
Nylon applications... 46, 176

— O —

Odors, combatting... 299
Oils:
Aircraft engine lubricants... 354
Hydraulic control, industrial... 277
Paper containers for... 238
Strainers... 308
Testing... 48
Oscillograph, electronic... 243
Oxygen cylinders... 296

— P —

Packaging:
Battle rations... 364
Food... 49
In war and peace... 66
Oil... 238
Paint:
Housing protection... 48
Stripper... 54
Paper:
Synthetic salt cake for... 114
Water-proof... 179
Parts protection... 182
Peanuts:
Meal... 301
New fiber made from... 294
Penicillin:
Action of... 100
Prices reduced... 353
Photographing the unseen... 116
Picking sticks, bonded wood... 313
Plasma, substitute... 37
Plastics:
Aviation uses of... 341
Coat for spark plugs... 242
Coaters... 181
Dispenser... 224
Drafting instruments... 51
Drinking cups... 224
Dyed... 224
Eyes, artificial... 178
Film, tough... 298
Flame spraying... 340
Foam... 303
For navy... 82
Future... 152
Hangars... 237
Heat resistance in... 48
Helicopter cabins... 48
Jigs, speed carbon plating... 48
Leather-like... 237
Metals plus... 222
Models... 29
Molecules measured... 348
Office furniture... 29
Pencil ferrules... 311
Phenolic glue... 222
Plating on... 344
Plumbing fixtures... 174
Preformed

Printing plates... 366
Pumps... 152
Railroad uses of... 149
Research and... 26
Screen... 224
Sheaves... 148
Shrink-fit parts... 148
Slide rule... 302
Steam generator for presses... 344
Warning on... 194
Welding... 161
Plate rectifiers... 307
Platform, unloading, portable... 249
Plating:
Aluminum... 218, 245
On glass... 56
Plastics, metal plating... 223
Polarizers, synthetic... 294
Polishing lathe... 58
Polishing-wheel cement... 366
Porcelain enamel, electrostatic sprayed... 292
Power exchange... 236
Preheater, bus... 182
Presses, straightening... 312
Pressure gage diaphragms, welded... 56
Pressure regulator... 153
Produce by air... 322
Production:
American theory of... 305
Gear... 277
Hydraulic control for... 33
Protection, industrial... 100
Proteinase... 170
Pullman cars, new... 300
Pumps, hydraulic foot...

— Q —

Quartz crystals, stable... 91

— R —

Radio, two-way... 368
Radiosonde... 172
Railroad brake... 310
Railroads:
At work... 130
Chemicals in rails... 286
Chemistry serves the... 159
Electronics in railroading... 156
Foot-rest seat... 174
Maintenance costs... 230
Metals used by... 162
Planes and trains... 153
Pullman cars, new... 170
Research by the... 16
Wheels, action of... 165
Rayon, new fields for... 194
Records, thin sound... 298
Refrigerator barges... 179
Remote machine control... 34
Research:
Aviation... 22
Better metals through... 13
Chemistry in industry... 35
Control, machine... 19
Electronic aids to... 218
Farm, broad... 2
Government and... 2
Management and... 2
Manufacturing and... 2
Metal heating... 38
Opens the door, Kettering... 26
Plastics, products of... 16
Railways roll on... 116
University, advantages for industry... 183
Rheostats... 308
Riveter, alligator-jawed... 25
Rockets:
Assisted take-offs... 173
In the future... 55
Post-war flights... 100
Roller table top... 57
Couplings... 114
Silicone... 42
Tanks... 301
Rust-preventing, radiator

— S —

Safety match box... 250
Sander... 372
Saw and file attachment... 119
Saws:
Chain... 372
Timber... 185
Scientists:
Are people... 2
Comprehensive education... 40
Youth and age, place of... 50
Screens:
Plastic... 224
Screw machine, pneumatic... 120
Stainless steel... 215
Seaplane dock... 148
Sheaves, plastics faced... 363
Shop practice, reduces production cost... 15
Shot peening... 347
For stress relief... 245
Shrinkage control... 367
Silicon, abundant... 302
Silicones... 114
Rubber... 66
Tomorrow... 302
Slide rule:
Plastics... 369
Tells cutting speed... 298
Slings, safe...

Smokes, colored signal... 100
Sold, new lead-tin... 360
Sound-conditioning... 47
Stabilizer, electrical vehicle... 244
Stainless steel, cleaning... 178
Stamps, round-face... 184
Starch lacquer... 161
Steam generation... 108
Steel:
Cast-to-shape... 57
Multi-ingredient... 360
Temperature of, taking... 293
Stencil control, electronic... 212
Surface plates, granite... 238
Sweet-potato alcohol... 44
Switch:
Breaker... 55
Temperature limit... 58
Synthetic:
Chlorinated rubber... 185
Coated metals... 130
Compar, uses of... 117
Polarizers... 294
Rubber:
Dichlorostyrene in... 161
Neoprene... 236
Phenolic resin aids... 236
Thiokol powder... 301
Tires, better... 347

— T —

Tank seats... 241
Tanks, rubber... 42
Tannin... 100
Tape, cork-filled... 309
Tax chart... 180
Taxes curb industrial development... 45
Technological eras... 66
Television:
Engineer's view of... 322
Large screen... 362
Projection... 41
Temperature limit switch... 58
Testing:
Materials... 177
Oil... 48
Thickness measurement... 94
Thiophene, cheaper... 356
Thread:
Design... 66
Gages... 285
Grinder... 371
Timers:
Interval... 118
X-ray... 112
Tires, cooler... 249
Tools:
Clamped-on... 122
Special production... 49
Torquemeter, machine... 340
Torque wrench, use of... 230
Trackside servicing... 18
Tractors, greater use of... 347
Transformers:
Continous variable voltage... 310
Power-circuit... 120
Transmission rings, plastics... 307
"Tree of Life", yields industrial materials... 42
Trucks:
High-lift... 54
Post-war... 34
Specialized hauling... 110
Trusses, welded... 300
Tube finisher... 186
Turbine locomotive... 113
Turbo-electric power... 364

— U —

Ultra-violet rays, absorbed... 296
University research, advantages for industry... 116

— V —

V-belts replace chain drives... 294
Vaporizer... 373
Visual standards, post-war jobs... 234
Vitamin-A source... 51

— W —

War equipment, storing... 340
Water pump... 246
Water purification... 249
Weather-proof containers... 145
Weed killer... 218
Weighing... 47
Welding:
Automatic high-current... 298
Clamp... 118
Construction by... 33
Gun, portable... 309
Machines... 50, 53
Plastics... 161
Pressure gage diaphragms... 312
Storage battery welders... 53, 366
Trusses, welded... 300
Wire:
Drawing... 232
Stripper... 376
Tinned... 111
Wood:
Die blocks... 34
Waste, uses of... 293

— Z —

Zinc-alloy dies... 357
Zipper, sealing... 44

00
60
47
44
78
84
61
08
57
60
93
12
38
44
55
58
85
30
117
194
161
136
136
101
147
241
42
100
309
180
45
66
322
362
41
58
177
48
94
356
66
285
371
118
112
249
122
49
340
230
18
347
310
120
307
42
54
347
110
300
186
113
364
296
116
294
373
234
51
340
246
249
145
218
47
298
118
33
309
53
161
312
366
300
232
376
111
34
293
357
44
45